

Certifications

WBENC: 237019

HUB: 1752439743100-86536

DBE: VN 20657

NCTRCA WFWB38444Y0909

NELAP Certifications

Lubbock: T104704219-08-TX
LELAP-02003
Kansas E-10317

El Paso: T104704221-08-TX
LELAP-02002

Midland: T104704392-08-TX

Analytical and Quality Control Report

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Report Date: October 7, 2008

Work Order: 8080828



Project Name: HELSTF GROUNDWATER
Project Number: 65

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
170067	HLSF-0085-HMW-014-0808	water	2008-08-06	14:15	2008-08-06
170168	HLSF-0085-HMW-055-0808	water	2008-08-08	13:16	2008-08-08
170170	HLSF-0085-HMW-010-0808	water	2008-08-07	10:20	2008-08-07
170455	HLSF-0085-HMW-054-0808	water	2008-08-11	10:08	2008-08-11
170457	HLSF-0085-D RW-008-0808	water	2008-08-11	12:55	2008-08-11
170843	HLSF-0085-HMW-043-0808	water	2008-08-13	09:45	2008-08-13
170986	HLSF-0085-DRW-017-0808	water	2008-08-14	10:30	2008-08-14
171111	HLSF-0085-HMW-062-0808	water	2008-08-18	14:00	2008-08-18
171300	HLSF-0085-HMW-008-0808	water	2008-08-19	10:48	2008-08-19
171303	HLSF-0085-HMW-034-0808	water	2008-08-19	12:46	2008-08-19
171731	HLSF-0085-HMW-033-0808	water	2008-08-21	09:42	2008-08-21
171733	HLSF-0085-HMW-059-0808	water	2008-08-21	11:45	2008-08-21
171735	HLSF-0085-DRW-016-0808	water	2008-08-22	10:25	2008-08-22
172137	HLSF-0085-DRW-114-0808	water	2008-08-27	13:35	2008-08-27
172139	HLSF-0085-DRW-014-0808	water	2008-08-27	13:35	2008-08-27

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
172467	HLSF-0085-HMW-053-0808	water	2008-08-28	12:20	2008-08-28
172638	HLSF-0085-HMW-061-0908	water	2008-09-02	10:25	2008-09-02
172640	HLSF-0085-HMW-060-0908	water	2008-09-02	13:15	2008-09-02
172795	HLSF-0085-HMW-063-0908	water	2008-09-03	12:50	2008-09-03
172797	HLSF-0085-HMW-058-0908	water	2008-09-03	10:10	2008-09-05
172908	HLSF-0085-HMW-057-0908	water	2008-09-04	11:15	2008-09-04
172910	HLSF-0085-DRW-002-0908	water	2008-09-04	13:41	2008-09-04
173041	HLSF-0085-RB-001-0908	water	2008-09-08	15:30	2008-09-09
173043	HLSF-0085-HCF-003-0908	water	2008-09-08	12:00	2008-09-08
173045	HLSF-0085-HCF-103-0908	water	2008-09-08	12:00	2008-09-08

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 28 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director

Standard Flags

B - The sample contains less than ten times the concentration found in the method blank.

Case Narrative

Samples for project HELSTF GROUNDWATER, HELSTF GROUNDWATER, HELSTF GROUNDWATER, HELSTF GROUNDWATER, HELSTF GROUNDWATER, HELSTF GROUNDWATER, HELSTF GROUNDWATER, HELSTF GROUNDWATER, HELSTF GROUNDWATER, HELSTF GROUNDWATER, HELSTF GROUNDWATER, HELSTF GROUNDWATER, HELSTF GROUNDWATER, HELSTF GROUNDWATER, HELSTF GROUNDWATER, HELSTF GROUNDWATER, HELSTF GROUNDWATER and HELSTF GROUNDWATER were received by TraceAnalysis, Inc. on 2008-08-06, 2008-08-08, 2008-08-07, 2008-08-11, 2008-08-11, 2008-08-13, 2008-08-14, 2008-08-18, 2008-08-19, 2008-08-19, 2008-08-21, 2008-08-21, 2008-08-22, 2008-08-27, 2008-08-27, 2008-08-28, 2008-09-02, 2008-09-02, 2008-09-03, 2008-09-05, 2008-09-04, 2008-09-04, 2008-09-09, 2008-09-08 and 2008-09-08 and assigned to work orders 8080828, 8081109, 8081110, 8081318, 8081319, 8081533, 8081820, 8082006, 8082103, 8082105, 8082517, 8082518, 8082519, 8082824, 8082825, 8090219, 8090411, 8090412, 8090519, 8090520, 8090810, 8090811, 8091019, 8091020 and 8091021 respectively. Samples for work order 8080828 were received intact without headspace and at a temperature of 4.0 deg. C.Samples for work order 8081109 were received intact without headspace and at a temperature of 4.0 deg. C.Samples for work order 8081110 were received intact without headspace and at a temperature of 4.0 deg. C.Samples for work order 8081318 were received intact without headspace and at a temperature of 4.0 deg. C.Samples for work order 8081319 were received intact without headspace and at a temperature of 4.0 deg. C.Samples for work order 8081533 were received intact without headspace and at a temperature of 4.0 deg. C.Samples for work order 8081820 were received intact without headspace and at a temperature of 4.0 deg. C.Samples for work order 8082006 were received intact without headspace and at a temperature of 4.0 deg. C.Samples for work order 8082103 were received intact without headspace and at a temperature of 4.0 deg. C.Samples for work order 8082105 were received intact without headspace and at a temperature of 4.0 deg. C.Samples for work order 8082517 were received intact without headspace and at a temperature of 4.0 deg. C.Samples for work order 8082518 were received intact without headspace and at a temperature of 4.0 deg C.Samples for work order 8082519 were received intact without headspace and at a temperature of 4.0 deg. C.Samples for work order 8082824 were received intact without headspace and at a temperature of 4.0 dec C.Samples for work order 8082825 were received intact without headspace and at a temperature of 4.0 dec C.Samples for work order 8090219 were received intact without headspace and at a temperature of 4.0 deg. C.Samples for work order 8090411 were received intact without headspace and at a temperature of 4.0 deg. C.Samples for work order 8090412 were received intact without headspace and at a temperature of 4.0 deg. C.Samples for work order 8090519 were received intact without headspace and at a temperature of 4.0 dec C.Samples for work order 8090520 were received intact without headspace and at a temperature of 4.0 deg.C.Samples for work order 8090810 were received intact without headspace and at a temperature of 4.0 dec C.Samples for work order 8090811 were received intact without headspace and at a temperature of 4.0 dec C.Samples for work order 8091019 were received intact without headspace and at a temperature of 4.0 deg. C.Samples for work order 8091020 were received intact without headspace and at a temperature of 4.0 deg. C.Samples for work order 8091021 were received intact without headspace and at a temperature of 4.0 deg. C.

Samples were analyzed for the following tests using their respective methods.

Test	Method
TPH GRO	S 8015B

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work orders 8080828, 8081109, 8081110, 8081318, 8081319, 8081533, 8081820, 8082006, 8082103, 8082105, 8082517, 8082518.

8082519, 8082824, 8082825, 8090219, 8090411, 8090412, 8090519, 8090520, 8090810, 8090811, 8091019, 8091020 and 8091021 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Analytical Report

Sample: 170067 - HLSF-0085-HMW-014-0808

Laboratory:	Lubbock		
Analysis:	TPH GRO	Analytical Method:	S 8015B
QC Batch:	51330	Date Analyzed:	2008-08-11
Prep Batch:	44019	Sample Preparation:	2008-08-11
		Prep Method:	S 5030B
		Analyzed By:	MT
		Prepared By:	MT

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<0.100	mg/L	1	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0950	mg/L	1	0.100	95	74.5 - 111
4-Bromofluorobenzene (4-BFB)		0.0959	mg/L	1	0.100	96	61.7 - 115.8

Sample: 170168 - HLSF-0085-HMW-055-0808

Laboratory:	Lubbock		
Analysis:	TPH GRO	Analytical Method:	S 8015B
QC Batch:	51330	Date Analyzed:	2008-08-11
Prep Batch:	44019	Sample Preparation:	2008-08-11
		Prep Method:	S 5030B
		Analyzed By:	MT
		Prepared By:	MT

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<0.100	mg/L	1	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0935	mg/L	1	0.100	94	74.5 - 111
4-Bromofluorobenzene (4-BFB)		0.0950	mg/L	1	0.100	95	61.7 - 115.8

Sample: 170170 - HLSF-0085-HMW-010-0808

Laboratory:	Lubbock		
Analysis:	TPH GRO	Analytical Method:	S 8015B
QC Batch:	51330	Date Analyzed:	2008-08-11
Prep Batch:	44019	Sample Preparation:	2008-08-11
		Prep Method:	S 5030B
		Analyzed By:	MT
		Prepared By:	MT

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<0.100	mg/L	1	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0920	mg/L	1	0.100	92	74.5 - 111
4-Bromofluorobenzene (4-BFB)		0.0907	mg/L	1	0.100	91	61.7 - 115.8

Sample: 170455 - HLSF-0085-HMW-054-0808

Laboratory: Lubbock
Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5030B
QC Batch: 51490 Date Analyzed: 2008-08-15 Analyzed By: ER
Prep Batch: 44146 Sample Preparation: 2008-08-15 Prepared By: ER

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<0.100	mg/L	1	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0920	mg/L	1	0.100	92	74.5 - 111
4-Bromofluorobenzene (4-BFB)		0.0976	mg/L	1	0.100	98	61.7 - 115.8

Sample: 170457 - HLSF-0085-D RW-008-0808

Laboratory: Lubbock
Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5030B
QC Batch: 51490 Date Analyzed: 2008-08-15 Analyzed By: ER
Prep Batch: 44146 Sample Preparation: 2008-08-15 Prepared By: ER

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<0.100	mg/L	1	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0918	mg/L	1	0.100	92	74.5 - 111
4-Bromofluorobenzene (4-BFB)		0.0974	mg/L	1	0.100	97	61.7 - 115.8

Sample: 170843 - HLSF-0085-HMW-043-0808

Laboratory: Lubbock
Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5030B
QC Batch: 51490 Date Analyzed: 2008-08-15 Analyzed By: ER
Prep Batch: 44146 Sample Preparation: 2008-08-15 Prepared By: ER

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<0.100	mg/L	1	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0894	mg/L	1	0.100	89	74.5 - 111
4-Bromofluorobenzene (4-BFB)		0.0949	mg/L	1	0.100	95	61.7 - 115.8

Sample: 170986 - HLSF-0085-DRW-017-0808

Laboratory:	Lubbock	Analytical Method:	S 8015B	Prep Method:	S 5030B
Analysis:	TPH GRO	Date Analyzed:	2008-08-22	Analyzed By:	MT
QC Batch:	51709	Sample Preparation:	2008-08-22	Prepared By:	MT
Prep Batch:	44336				

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<0.100	mg/L	1	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	¹	0.0792	mg/L	1	0.100	79	79.4 - 122.7
4-Bromofluorobenzene (4-BFB)		0.0651	mg/L	1	0.100	65	51.3 - 116.6

Sample: 171111 - HLSF-0085-HMW-062-0808

Laboratory:	Lubbock	Analytical Method:	S 8015B	Prep Method:	S 5030B
Analysis:	TPH GRO	Date Analyzed:	2008-08-22	Analyzed By:	MT
QC Batch:	51709	Sample Preparation:	2008-08-22	Prepared By:	MT
Prep Batch:	44336				

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<0.100	mg/L	1	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.105	mg/L	1	0.100	105	79.4 - 122.7
4-Bromofluorobenzene (4-BFB)		0.0866	mg/L	1	0.100	87	51.3 - 116.6

¹ TFT surrogate recovery outside normal limits. BFB surrogate recovery shows the method to be in control.

Sample: 171300 - HLSF-0085-HMW-008-0808

Laboratory: Lubbock
Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5030B
QC Batch: 51709 Date Analyzed: 2008-08-22 Analyzed By: MT
Prep Batch: 44336 Sample Preparation: 2008-08-22 Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<0.100	mg/L	1	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.108	mg/L	1	0.100	108	79.4 - 122.7
4-Bromofluorobenzene (4-BFB)		0.0878	mg/L	1	0.100	88	51.3 - 116.6

Sample: 171303 - HLSF-0085-HMW-034-0808

Laboratory: Lubbock
Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5030B
QC Batch: 51709 Date Analyzed: 2008-08-22 Analyzed By: MT
Prep Batch: 44336 Sample Preparation: 2008-08-22 Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<0.100	mg/L	1	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.106	mg/L	1	0.100	106	79.4 - 122.7
4-Bromofluorobenzene (4-BFB)		0.0847	mg/L	1	0.100	85	51.3 - 116.6

Sample: 171731 - HLSF-0085-HMW-033-0808

Laboratory: Lubbock
Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5030B
QC Batch: 51757 Date Analyzed: 2008-08-25 Analyzed By: MT
Prep Batch: 44384 Sample Preparation: 2008-08-25 Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<0.100	mg/L	1	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.107	mg/L	1	0.100	107	79.4 - 122.7
4-Bromofluorobenzene (4-BFB)		0.0852	mg/L	1	0.100	85	51.3 - 116.6

Sample: 171733 - HLSF-0085-HMW-059-0808

Laboratory: Lubbock
Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5030B
QC Batch: 51757 Date Analyzed: 2008-08-25 Analyzed By: MT
Prep Batch: 44384 Sample Preparation: 2008-08-25 Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<0.100	mg/L	1	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.106	mg/L	1	0.100	106	79.4 - 122.7
4-Bromofluorobenzene (4-BFB)		0.0852	mg/L	1	0.100	85	51.3 - 116.6

Sample: 171735 - HLSF-0085-DRW-016-0808

Laboratory: Lubbock
Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5030B
QC Batch: 51757 Date Analyzed: 2008-08-25 Analyzed By: MT
Prep Batch: 44384 Sample Preparation: 2008-08-25 Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<0.100	mg/L	1	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.111	mg/L	1	0.100	111	79.4 - 122.7
4-Bromofluorobenzene (4-BFB)		0.0859	mg/L	1	0.100	86	51.3 - 116.6

Sample: 172137 - HLSF-0085-DRW-114-0808

Laboratory: Lubbock
Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5030B
QC Batch: 51916 Date Analyzed: 2008-08-29 Analyzed By: ER
Prep Batch: 44521 Sample Preparation: 2008-08-29 Prepared By: ER

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<0.100	mg/L	1	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.120	mg/L	1	0.100	120	79.4 - 122.7
4-Bromofluorobenzene (4-BFB)		0.0823	mg/L	1	0.100	82	51.3 - 116.6

Sample: 172139 - HLSF-0085-DRW-014-0808

Laboratory:	Lubbock	Analytical Method:	S 8015B	Prep Method:	S 5030B
Analysis:	TPH GRO	Date Analyzed:	2008-08-29	Analyzed By:	ER
QC Batch:	51916	Sample Preparation:	2008-08-29	Prepared By:	ER
Prep Batch:	44521				

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<0.100	mg/L	1	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.119	mg/L	1	0.100	119	79.4 - 122.7
4-Bromofluorobenzene (4-BFB)		0.0803	mg/L	1	0.100	80	51.3 - 116.6

Sample: 172467 - HLSF-0085-HMW-053-0808

Laboratory:	Lubbock	Analytical Method:	S 8015B	Prep Method:	S 5030B
Analysis:	TPH GRO	Date Analyzed:	2008-09-03	Analyzed By:	ER
QC Batch:	52021	Sample Preparation:	2008-09-03	Prepared By:	ER
Prep Batch:	44599				

Parameter	Flag	RL Result	Units	Dilution	RL
GRO	²	<0.500	mg/L	5	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.464	mg/L	5	0.500	93	79.4 - 122.7
4-Bromofluorobenzene (4-BFB)		0.431	mg/L	5	0.500	86	51.3 - 116.6

²Sample ran at a dilution due to limited amount of sample.

Sample: 172638 - HLSF-0085-HMW-061-0908

Laboratory: Lubbock
Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5030B
QC Batch: 52076 Date Analyzed: 2008-09-04 Analyzed By: ER
Prep Batch: 44648 Sample Preparation: 2008-09-04 Prepared By: ER

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<0.100	mg/L	1	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.105	mg/L	1	0.100	105	79.4 - 122.7
4-Bromofluorobenzene (4-BFB)		0.0861	mg/L	1	0.100	86	51.3 - 116.6

Sample: 172640 - HLSF-0085-HMW-060-0908

Laboratory: Lubbock
Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5030B
QC Batch: 52076 Date Analyzed: 2008-09-04 Analyzed By: ER
Prep Batch: 44648 Sample Preparation: 2008-09-04 Prepared By: ER

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<0.100	mg/L	1	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0969	mg/L	1	0.100	97	79.4 - 122.7
4-Bromofluorobenzene (4-BFB)		0.0863	mg/L	1	0.100	86	51.3 - 116.6

Sample: 172795 - HLSF-0085-HMW-063-0908

Laboratory: Lubbock
Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5030B
QC Batch: 52195 Date Analyzed: 2008-09-09 Analyzed By: MT
Prep Batch: 44755 Sample Preparation: 2008-09-09 Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<0.100	mg/L	1	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.105	mg/L	1	0.100	105	79.4 - 122.7
4-Bromofluorobenzene (4-BFB)		0.0877	mg/L	1	0.100	88	51.3 - 116.6

Sample: 172797 - HLSF-0085-HMW-058-0908

Laboratory: Lubbock
Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5030B
QC Batch: 52195 Date Analyzed: 2008-09-09 Analyzed By: MT
Prep Batch: 44755 Sample Preparation: 2008-09-09 Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<0.100	mg/L	1	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0979	mg/L	1	0.100	98	79.4 - 122.7
4-Bromofluorobenzene (4-BFB)		0.0854	mg/L	1	0.100	85	51.3 - 116.6

Sample: 172908 - HLSF-0085-HMW-057-0908

Laboratory: Lubbock
Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5030B
QC Batch: 52195 Date Analyzed: 2008-09-09 Analyzed By: MT
Prep Batch: 44755 Sample Preparation: 2008-09-09 Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<0.100	mg/L	1	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.100	mg/L	1	0.100	100	79.4 - 122.7
4-Bromofluorobenzene (4-BFB)		0.0879	mg/L	1	0.100	88	51.3 - 116.6

Sample: 172910 - HLSF-0085-DRW-002-0908

Laboratory: Lubbock
Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5030B
QC Batch: 52293 Date Analyzed: 2008-09-11 Analyzed By: ER
Prep Batch: 44826 Sample Preparation: 2008-09-11 Prepared By: ER

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		1.13	mg/L	1	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0868	mg/L	1	0.100	87	79.4 - 122.7
4-Bromofluorobenzene (4-BFB)	³	0.121	mg/L	1	0.100	121	51.3 - 116.6

Sample: 173041 - HLSF-0085-RB-001-0908

Laboratory: Lubbock
 Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5030B
 QC Batch: 52293 Date Analyzed: 2008-09-11 Analyzed By: ER
 Prep Batch: 44826 Sample Preparation: 2008-09-11 Prepared By: ER

Parameter	Flag	RL Result	Units	Dilution	RL
GRO	⁴	<0.500	mg/L	5	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.591	mg/L	5	0.500	118	79.4 - 122.7
4-Bromofluorobenzene (4-BFB)		0.467	mg/L	5	0.500	93	51.3 - 116.6

Sample: 173043 - HLSF-0085-HCF-003-0908

Laboratory: Lubbock
 Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5030B
 QC Batch: 52293 Date Analyzed: 2008-09-11 Analyzed By: ER
 Prep Batch: 44826 Sample Preparation: 2008-09-11 Prepared By: ER

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		0.670	mg/L	1	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0990	mg/L	1	0.100	99	79.4 - 122.7
4-Bromofluorobenzene (4-BFB)	⁵	0.119	mg/L	1	0.100	119	51.3 - 116.6

³High surrogate recovery due to peak interference.

⁴Sample ran at dilution due to lack of sample. •

⁵High surrogate recovery due to peak interference.

Sample: 173045 - HLSF-0085-HCF-103-0908

Laboratory:	Lubbock		
Analysis:	TPH GRO	Analytical Method:	S 8015B
QC Batch:	52293	Date Analyzed:	2008-09-11
Prep Batch:	44826	Sample Preparation:	2008-09-11
		Prep Method:	S 5030B
		Analyzed By:	ER
		Prepared By:	ER

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		0.913	mg/L	1	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.101	mg/L	1	0.100	101	79.4 - 122.7
4-Bromofluorobenzene (4-BFB)	⁶	0.138	mg/L	1	0.100	138	51.3 - 116.6

Method Blank (1) QC Batch: 51330

QC Batch:	51330	Date Analyzed:	2008-08-11	Analyzed By:	MT
Prep Batch:	44019	QC Preparation:	2008-08-11	Prepared By:	MT

Parameter	Flag	MDL Result	Units	RL
GRO		<0.0231	mg/L	0.1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0873	mg/L	1	0.100	87	74.5 - 111
4-Bromofluorobenzene (4-BFB)		0.0885	mg/L	1	0.100	88	61.7 - 115.8

Method Blank (1) QC Batch: 51490

QC Batch:	51490	Date Analyzed:	2008-08-15	Analyzed By:	ER
Prep Batch:	44146	QC Preparation:	2008-08-15	Prepared By:	ER

Parameter	Flag	MDL Result	Units	RL
GRO		<0.0231	mg/L	0.1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0858	mg/L	1	0.100	86	74.5 - 111
4-Bromofluorobenzene (4-BFB)		0.0892	mg/L	1	0.100	89	61.7 - 115.8

⁶High surrogate recovery due to peak interference.

Method Blank (1) QC Batch: 51709

QC Batch: 51709 Date Analyzed: 2008-08-22 Analyzed By: MT
Prep Batch: 44336 QC Preparation: 2008-08-22 Prepared By: MT

Parameter	Flag	MDL Result	Units	RL
GRO		<0.0229	mg/L	0.1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.101	mg/L	1	0.100	101	79.4 - 122.7
4-Bromofluorobenzene (4-BFB)		0.0821	mg/L	1	0.100	82	51.3 - 116.6

Method Blank (1) QC Batch: 51757

QC Batch: 51757 Date Analyzed: 2008-08-25 Analyzed By: MT
Prep Batch: 44384 QC Preparation: 2008-08-25 Prepared By: MT

Parameter	Flag	MDL Result	Units	RL
GRO		<0.0229	mg/L	0.1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.102	mg/L	1	0.100	102	79.4 - 122.7
4-Bromofluorobenzene (4-BFB)		0.0810	mg/L	1	0.100	81	51.3 - 116.6

Method Blank (1) QC Batch: 51916

QC Batch: 51916 Date Analyzed: 2008-08-29 Analyzed By: ER
Prep Batch: 44521 QC Preparation: 2008-08-29 Prepared By: ER

Parameter	Flag	MDL Result	Units	RL
GRO		<0.0229	mg/L	0.1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.108	mg/L	1	0.100	108	79.4 - 122.7
4-Bromofluorobenzene (4-BFB)		0.0857	mg/L	1	0.100	86	51.3 - 116.6

Report Date: October 7, 2008
65

Work Order: 8080828
HELSTF GROUNDWATER

Page Number: 16 of 28

Method Blank (1) QC Batch: 52021

QC Batch: 52021 Date Analyzed: 2008-09-03 Analyzed By: ER
Prep Batch: 44599 QC Preparation: 2008-09-03 Prepared By: ER

Parameter	Flag	MDL Result	Units	RL
GRO		<0.0229	mg/L	0.1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0906	mg/L	1	0.100	91	79.4 - 122.7
4-Bromofluorobenzene (4-BFB)		0.0813	mg/L	1	0.100	81	51.3 - 116.6

Method Blank (1) QC Batch: 52076

QC Batch: 52076 Date Analyzed: 2008-09-04 Analyzed By: ER
Prep Batch: 44648 QC Preparation: 2008-09-04 Prepared By: ER

Parameter	Flag	MDL Result	Units	RL
GRO		<0.0229	mg/L	0.1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0913	mg/L	1	0.100	91	79.4 - 122.7
4-Bromofluorobenzene (4-BFB)		0.0814	mg/L	1	0.100	81	51.3 - 116.6

Method Blank (1) QC Batch: 52195

QC Batch: 52195 Date Analyzed: 2008-09-09 Analyzed By: MT
Prep Batch: 44755 QC Preparation: 2008-09-09 Prepared By: MT

Parameter	Flag	MDL Result	Units	RL
GRO		<0.0229	mg/L	0.1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0970	mg/L	1	0.100	97	79.4 - 122.7
4-Bromofluorobenzene (4-BFB)		0.0848	mg/L	1	0.100	85	51.3 - 116.6

Method Blank (1) QC Batch: 52293

QC Batch: 52293 Date Analyzed: 2008-09-11 Analyzed By: ER
Prep Batch: 44826 QC Preparation: 2008-09-11 Prepared By: ER

Parameter	Flag	MDL Result	Units	RL
GRO		<0.0229	mg/L	0.1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.110	mg/L	1	0.100	110	79.4 - 122.7
4-Bromofluorobenzene (4-BFB)		0.0827	mg/L	1	0.100	83	51.3 - 116.6

Laboratory Control Spike (LCS-1)

QC Batch: 51330 Date Analyzed: 2008-08-11 Analyzed By: MT
Prep Batch: 44019 QC Preparation: 2008-08-11 Prepared By: MT

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	0.976	mg/L	1	1.00	<0.0231	98	77.7 - 126.3

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	0.988	mg/L	1	1.00	<0.0231	99	77.7 - 126.3	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0979	0.100	mg/L	1	0.100	98	100	76.7 - 126
4-Bromofluorobenzene (4-BFB)	0.0993	0.0981	mg/L	1	0.100	99	98	80.5 - 119

Laboratory Control Spike (LCS-1)

QC Batch: 51490 Date Analyzed: 2008-08-15 Analyzed By: ER
Prep Batch: 44146 QC Preparation: 2008-08-15 Prepared By: ER

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	0.931	mg/L	1	1.00	<0.0231	93	77.7 - 126.3

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	0.950	mg/L	1	1.00	<0.0231	95	77.7 - 126.3	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCS Result	Units	Dil.	Spike Amount	LCS Rec.	LCS Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0932	0.0985	mg/L	1	0.100	93	98	76.7 - 126
4-Bromofluorobenzene (4-BFB)	0.0952	0.107	mg/L	1	0.100	95	107	80.5 - 119

Laboratory Control Spike (LCS-1)

QC Batch: 51709
Prep Batch: 44336

Date Analyzed: 2008-08-22
QC Preparation: 2008-08-22

Analyzed By: MT
Prepared By: MT

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	0.961	mg/L	1	1.00	<0.0229	96	75.6 - 116.1

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	0.979	mg/L	1	1.00	<0.0229	98	75.6 - 116.1	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCS Result	Units	Dil.	Spike Amount	LCS Rec.	LCS Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0946	0.0948	mg/L	1	0.100	95	95	76.5 - 118.1
4-Bromofluorobenzene (4-BFB)	0.0996	0.0970	mg/L	1	0.100	100	97	74.7 - 117

Laboratory Control Spike (LCS-1)

QC Batch: 51757
Prep Batch: 44384

Date Analyzed: 2008-08-25
QC Preparation: 2008-08-25

Analyzed By: MT
Prepared By: MT

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	0.981	mg/L	1	1.00	<0.0229	98	75.6 - 116.1

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	0.966	mg/L	1	1.00	<0.0229	97	75.6 - 116.1	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0940	0.0970	mg/L	1	0.100	94	97	76.5 - 118.1
4-Bromofluorobenzene (4-BFB)	0.0999	0.0988	mg/L	1	0.100	100	99	74.7 - 117

Laboratory Control Spike (LCS-1)

QC Batch: 51916 Date Analyzed: 2008-08-29 Analyzed By: ER
Prep Batch: 44521 QC Preparation: 2008-08-29 Prepared By: ER

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	1.06	mg/L	1	1.00	<0.0229	106	75.6 - 116.1

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	0.996	mg/L	1	1.00	<0.0229	100	75.6 - 116.1	6	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.108	0.0989	mg/L	1	0.100	108	99	76.5 - 118.1
4-Bromofluorobenzene (4-BFB)	0.0906	0.0939	mg/L	1	0.100	91	94	74.7 - 117

Laboratory Control Spike (LCS-1)

QC Batch: 52021 Date Analyzed: 2008-09-03 Analyzed By: ER
Prep Batch: 44599 QC Preparation: 2008-09-03 Prepared By: ER

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	1.02	mg/L	1	1.00	<0.0229	102	75.6 - 116.1

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	1.08	mg/L	1	1.00	<0.0229	108	75.6 - 116.1	6	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.103	0.110	mg/L	1	0.100	103	110	76.5 - 118.1
4-Bromofluorobenzene (4-BFB)	0.0992	0.108	mg/L	1	0.100	99	108	74.7 - 117

Laboratory Control Spike (LCS-1)

QC Batch: 52076 Date Analyzed: 2008-09-04 Analyzed By: ER
Prep Batch: 44648 QC Preparation: 2008-09-04 Prepared By: ER

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	0.895	mg/L	1	1.00	<0.0229	89	75.6 - 116.1

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	0.901	mg/L	1	1.00	<0.0229	90	75.6 - 116.1	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0902	0.0878	mg/L	1	0.100	90	88	76.5 - 118.1
4-Bromofluorobenzene (4-BFB)	0.102	0.0994	mg/L	1	0.100	102	99	74.7 - 117

Laboratory Control Spike (LCS-1)

QC Batch: 52195 Date Analyzed: 2008-09-09 Analyzed By: MT
Prep Batch: 44755 QC Preparation: 2008-09-09 Prepared By: MT

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	1.01	mg/L	1	1.00	<0.0229	101	75.6 - 116.1

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	1.13	mg/L	1	1.00	<0.0229	113	75.6 - 116.1	11	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.103	0.0993	mg/L	1	0.100	103	99	76.5 - 118.1
4-Bromofluorobenzene (4-BFB)	0.106	0.0929	mg/L	1	0.100	106	93	74.7 - 117

Laboratory Control Spike (LCS-1)

QC Batch: 52293 Date Analyzed: 2008-09-11 Analyzed By: ER
Prep Batch: 44826 QC Preparation: 2008-09-11 Prepared By: ER

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	1.01	mg/L	1	1.00	<0.0229	101	75.6 - 116.1

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	1.01	mg/L	1	1.00	<0.0229	101	75.6 - 116.1	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0946	0.0986	mg/L	1	0.100	95	99	76.5 - 118.1
4-Bromofluorobenzene (4-BFB)	0.0943	0.0995	mg/L	1	0.100	94	100	74.7 - 117

Matrix Spike (MS-1) Spiked Sample: 170170

QC Batch: 51330 Date Analyzed: 2008-08-11 Analyzed By: MT
Prep Batch: 44019 QC Preparation: 2008-08-11 Prepared By: MT

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	0.853	mg/L	1	1.00	<0.0231	85	40.2 - 145

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	0.721	mg/L	1	1.00	<0.0231	72	40.2 - 145	17	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0931	0.0784	mg/L	1	0.1	93	78	48.6 - 135.8
4-Bromofluorobenzene (4-BFB)	0.0927	0.0767	mg/L	1	0.1	93	77	48 - 142.4

Matrix Spike (MS-1) Spiked Sample: 170843

QC Batch: 51490 Date Analyzed: 2008-08-15 Analyzed By: ER
Prep Batch: 44146 QC Preparation: 2008-08-15 Prepared By: ER

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	0.923	mg/L	1	1.00	<0.0231	92	40.2 - 145

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	0.928	mg/L	1	1.00	<0.0231	93	40.2 - 145	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0922	0.0914	mg/L	1	0.1	92	91	48.6 - 135.8
4-Bromofluorobenzene (4-BFB)	0.0997	0.101	mg/L	1	0.1	100	101	48 - 142.4

Matrix Spike (MS-1) Spiked Sample: 171303

QC Batch: 51709 Date Analyzed: 2008-08-22 Analyzed By: MT
Prep Batch: 44336 QC Preparation: 2008-08-22 Prepared By: MT

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	0.885	mg/L	1	1.00	<0.0229	88	57.7 - 128.7

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	0.823	mg/L	1	1.00	<0.0229	82	57.7 - 128.7	7	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0912	0.0825	mg/L	1	0.1	91	82	63.2 - 128.1
4-Bromofluorobenzene (4-BFB)	0.0929	0.0834	mg/L	1	0.1	93	83	63.6 - 128

Matrix Spike (MS-1) Spiked Sample: 171733

QC Batch: 51757 Date Analyzed: 2008-08-25 Analyzed By: MT
Prep Batch: 44384 QC Preparation: 2008-08-25 Prepared By: MT

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	0.700	mg/L	1	1.00	<0.0229	70	57.7 - 128.7

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	0.808	mg/L	1	1.00	<0.0229	81	57.7 - 128.7	14	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0739	0.0852	mg/L	1	0.1	74	85	63.2 - 128.1
4-Bromofluorobenzene (4-BFB)	0.0724	0.0862	mg/L	1	0.1	72	86	63.6 - 128

Matrix Spike (MS-1) Spiked Sample: 172139

QC Batch: 51916 Date Analyzed: 2008-08-29 Analyzed By: ER
Prep Batch: 44521 QC Preparation: 2008-08-29 Prepared By: ER

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	0.976	mg/L	1	1.00	0.0852	89	57.7 - 128.7

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	1.02	mg/L	1	1.00	0.0852	93	57.7 - 128.7	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.103	0.106	mg/L	1	0.1	103	106	63.2 - 128.1
4-Bromofluorobenzene (4-BFB)	0.0883	0.0865	mg/L	1	0.1	88	86	63.6 - 128

Matrix Spike (MS-1) Spiked Sample: 172467

QC Batch: 52021 Date Analyzed: 2008-09-03 Analyzed By: ER
Prep Batch: 44599 QC Preparation: 2008-09-03 Prepared By: ER

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	5.81	mg/L	5	5.00	<0.114	116	57.7 - 128.7

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	6.10	mg/L	5	5.00	<0.114	122	57.7 - 128.7	5	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.570	0.572	mg/L	5	0.5	114	114	63.2 - 128.1
4-Bromofluorobenzene (4-BFB)	0.550	0.536	mg/L	5	0.5	110	107	63.6 - 128

Matrix Spike (MS-1) Spiked Sample: 172638

QC Batch: 52076 Date Analyzed: 2008-09-04 Analyzed By: ER
Prep Batch: 44648 QC Preparation: 2008-09-04 Prepared By: ER

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	0.883	mg/L	1	1.00	0.0559	83	57.7 - 128.7

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	0.898	mg/L	1	1.00	0.0559	84	57.7 - 128.7	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0650	0.0817	mg/L	1	0.1	65	82	63.2 - 128.1
4-Bromofluorobenzene (4-BFB)	0.0638	0.0768	mg/L	1	0.1	64	77	63.6 - 128

Matrix Spike (MS-1) Spiked Sample: 172795

QC Batch: 52195 Date Analyzed: 2008-09-09 Analyzed By: MT
Prep Batch: 44755 QC Preparation: 2008-09-09 Prepared By: MT

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	0.838	mg/L	1	1.00	<0.0229	84	57.7 - 128.7

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	0.832	mg/L	1	1.00	<0.0229	83	57.7 - 128.7	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0761	0.0845	mg/L	1	0.1	76	84	63.2 - 128.1
4-Bromofluorobenzene (4-BFB)	0.0821	0.0940	mg/L	1	0.1	82	94	63.6 - 128

Matrix Spike (MS-1) Spiked Sample: 173041

QC Batch: 52293 Date Analyzed: 2008-09-11 Analyzed By: ER
Prep Batch: 44826 QC Preparation: 2008-09-11 Prepared By: ER

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	4.92	mg/L	5	5.00	<0.114	98	57.7 - 128.7

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	5.13	mg/L	5	5.00	<0.114	103	57.7 - 128.7	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.546	0.579	mg/L	5	0.5	109	116	63.2 - 128.1
4-Bromofluorobenzene (4-BFB)	0.561	0.560	mg/L	5	0.5	112	112	63.6 - 128

Standard (ICV-1)

QC Batch: 51330 Date Analyzed: 2008-08-11 Analyzed By: MT

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	0.970	97	85 - 115	2008-08-11

Standard (CCV-1)

QC Batch: 51330 Date Analyzed: 2008-08-11 Analyzed By: MT

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	0.998	100	85 - 115	2008-08-11

Standard (ICV-1)

QC Batch: 51490 Date Analyzed: 2008-08-15 Analyzed By: ER

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	0.962	96	85 - 115	2008-08-15

Standard (CCV-1)

QC Batch: 51490 Date Analyzed: 2008-08-15 Analyzed By: ER

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	0.906	91	85 - 115	2008-08-15

Standard (ICV-1)

QC Batch: 51709 Date Analyzed: 2008-08-22 Analyzed By: MT

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	0.901	90	85 - 115	2008-08-22

Standard (CCV-1)

QC Batch: 51709 Date Analyzed: 2008-08-22 Analyzed By: MT

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	0.946	95	85 - 115	2008-08-22

Standard (ICV-1)

QC Batch: 51757 Date Analyzed: 2008-08-25 Analyzed By: MT

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	0.957	96	85 - 115	2008-08-25

Standard (CCV-1)

QC Batch: 51757 Date Analyzed: 2008-08-25 Analyzed By: MT

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	0.903	90	85 - 115	2008-08-25

Standard (ICV-1)

QC Batch: 51916 Date Analyzed: 2008-08-29 Analyzed By: ER

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	0.896	90	85 - 115	2008-08-29

Standard (CCV-1)

QC Batch: 51916 Date Analyzed: 2008-08-29 Analyzed By: ER

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	0.920	92	85 - 115	2008-08-29

Standard (ICV-1)

QC Batch: 52021 Date Analyzed: 2008-09-03 Analyzed By: ER

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	1.09	109	85 - 115	2008-09-03

Standard (CCV-1)

QC Batch: 52021 Date Analyzed: 2008-09-03 Analyzed By: ER

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	1.06	106	85 - 115	2008-09-03

Standard (ICV-1)

QC Batch: 52076 Date Analyzed: 2008-09-04 Analyzed By: ER

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	0.895	90	85 - 115	2008-09-04

Standard (CCV-1)

QC Batch: 52076 Date Analyzed: 2008-09-04 Analyzed By: ER

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	0.893	89	85 - 115	2008-09-04

Standard (ICV-1)

QC Batch: 52195 Date Analyzed: 2008-09-09 Analyzed By: MT

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	0.892	89	85 - 115	2008-09-09

Standard (CCV-1)

QC Batch: 52195 Date Analyzed: 2008-09-09 Analyzed By: MT

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	0.890	89	85 - 115	2008-09-09

Standard (ICV-1)

QC Batch: 52293 Date Analyzed: 2008-09-11 Analyzed By: ER

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	1.02	102	85 - 115	2008-09-11

Standard (CCV-1)

QC Batch: 52293 Date Analyzed: 2008-09-11 Analyzed By: ER

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	1.15	115	85 - 115	2008-09-11